

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D205-541 REV. J &
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D205-541 REV. 4

REF. TCCA STC SH96-120,
FAA STC SR00696NY
EASA STC EASA.IM.R.S.01242

1.0 PURPOSE:

The purpose of this DSI is to provide operators of Bell 205/210/212/214/412 Rotorcraft equipped with Dart D205-541-043/-044/-045/-046 Heli-Utility-Baskets with an Upgrade Kit to replace the existing Lid Prop Arm Assembly with an Automatic Lid Opening Gas Spring Kit. The D205-541-051 Automatic Lid Opener Kit includes parts and hardware to install a gas spring on both ends of the D205-541-043/-044 basket. The D205-541-053 Automatic Lid Opener Kit includes parts and hardware to install a gas spring on both ends of the D205-541-045/-046 basket.

2.0 PARTS LIST:

ITEM No.	QTY -051	QTY -053	PART NUMBER	DESCRIPTION
	X		D205-541-051	AUTOMATIC LID OPENER KIT
		X	D205-541-053	AUTOMATIC LID OPENER KIT
1	4	4	D3953-3	GAS SPRING STUD
2	4	4	D3953-7	GAS SPRING SPACER
3	4	4	D3953-9	GAS SPRING WASHER
4	6	6	D3953-17	GAS SPRING SPACER
5	2	2	D3953-19	GAS SPRING BRACKET
6	2	2	D3953-21	GAS SPRING BRACKET
7		2	D3969-3	GAS SPRING
8	2		D3969-9	GAS SPRING
9	4	4	AN3-14A	BOLT
10	4	4	AN3-20A	BOLT
11	4	4	AN310-4	CASTELLATED NUT
12	8	8	MS21042L3	NUT
13	4	4	MS24665-231	COTTER PIN
14	16	16	NAS1149F0332P	WASHER
15	4	4	NAS1149F0463P	WASHER

*Note:

For customers wishing to order new baskets with the Lid Opener pre-installed, use the following numbers:

D205-541-043 BASKET with AUTOMATIC LID OPENER installed = D205-541-043A

D205-541-044 BASKET with AUTOMATIC LID OPENER installed = D205-541-044A

D205-541-045 BASKET with AUTOMATIC LID OPENER installed = D205-541-045A

D205-541-046 BASKET with AUTOMATIC LID OPENER installed = D205-541-046A

3.0 PROCEDURE:

For D205-541-043/-044/-045/-046 Heli-Utility Baskets, replace the existing Prop Arm Assembly with gas springs on both ends of the basket. (NOTE: Once this modification is complete, it will not be possible to re-install the D2332-041 Prop Arm Assembly)

3.1 Remove the D2332-041 Prop Arm Assembly.

3.2 Grind flush and deburr the D2327-3 Spacer Bushing from the end of the basket base. Touch up paint per ICA-D205-541, Section 5.1.5.

CANADA DEPARTMENT OF TRANSPORT AIRCRAFT CERTIFICATION BRANCH DAO # 01-O-01
APPROVED BY: <i>[Signature]</i> D. SHEPHERD (DE # 02)
DATE: 16.05.12 CERT. NO.: SH96-120 ISSUE NO.: 3

B	FLIP GAS SPRING ORIENTATION, ADD D3969-9 ADD-053 KIT, NAS1149F0332P WASHER WAS 0363P	CP	16.05.12
A	NEW ISSUE	DB	15.02.23
REV.	DESCRIPTION	BY	DATE
DESIGN	DB	DART AEROSPACE LTD	
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	N/A	DSI 9710	SHEET 1 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	AUTOMATIC LID OPENER INSTL NTS	
DATE	16.05.12	COPYRIGHT © 2015 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

- 3.3 Locate the QTY 2 D3953-17 Gas Spring Spacer on the basket lid per Figure 1 (-043/-044) or Figure 2 (-045/-046). Trim steel mesh locally as required. Transfer mark and drill 2X Ø0.194 holes thru basket lid. Touch up paint per ICA-D205-541, Section 5.1.5. (Later model D2512 Basket Lids may be pre-drilled for gas spring brackets)
- 3.4 Install QTY 2 D3953-17 Gas Spring Spacer and D3953-19 Gas Spring Bracket to the basket lid using 2X AN3-20A bolts, NAS1149F0332P Washers and MS21042L3 Nuts as shown in Figure 3.
- 3.5 Locate the D3953-17 Gas Spring Spacer on the basket base as shown in Figure 1 (-043/-044) or Figure 2 (-045/-046). Trim steel mesh locally as required. Transfer mark and drill 2X Ø0.194 holes thru the basket base. Touch up paint per ICA-D205-541, Section 5.1.5.
- 3.6 Install the D3953-17 Gas Spring Spacer and D3953-21 Gas Spring Bracket to the basket base using 2X AN3-14A bolts, NAS1149F0332P Washers and MS21042L3 Nuts, as shown in Figure 3.
- 3.7 Insert D3953-3 Gas Spring Studs through the D3953-19 and D3953-21 Gas Spring Brackets from the inside of the basket. (May be performed prior to 3.6 if necessary because of basket mesh).
- 3.8 Install a D3953-7 Gas Spring Spacer on to each stud followed by the D3969-9 Gas Spring for D205-541-051 Kits or the D3969-3 Gas Spring for D205-541-053 Kits, D3953-9 Gas Spring Washer, NAS1149F0463P Washer and AN310-4 Castellated Nut. To secure the nut, install a MS24665-231 Cotter Pin into the D3953-3 Gas Spring Stud per MS33540 or AC43.13 Chapter 7-127.
NOTE: - With the Lid in the closed position, the D3969 Gas Spring should NOT be fully compressed.
- Open the lid to accommodate the installation of the fully extended gas spring.
- 3.9 Repeat the installation on the opposite end of the basket.
- 3.10 Test the installation. If installed properly, the Gas Springs should assist in both opening and closing the basket lid.

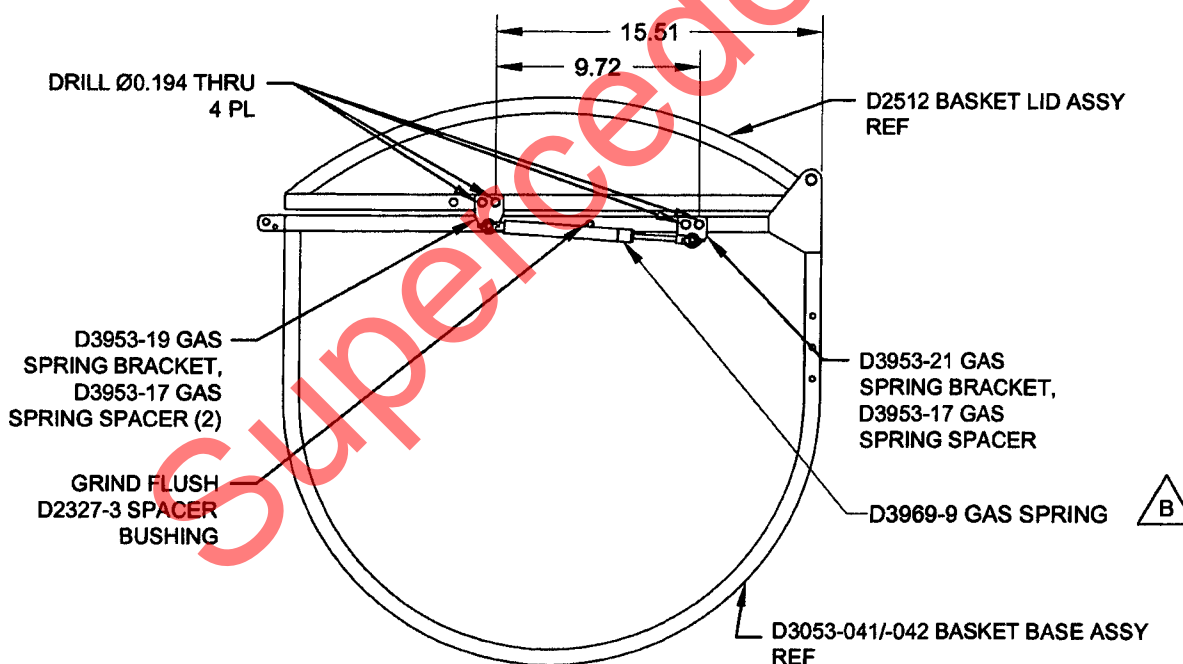


FIGURE 1: D205-541-051 AUTOMATIC LID OPENER INSTALLATION
(ON D205-541-043/-044 HELI-UTILITY BASKET, BOTH ENDS)

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED
BY: *D. Shepherd*
D. SHEPHERD (DE # 02)

DATE: 16.05.12
CERT. NO.: SH96-120
ISSUE NO.: 3

DESIGN	DB	DART AEROSPACE LTD	
DRAWN	<i>g</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>M. Lee</i>	DRAWING NO.	REV. B
MFG. APPR.	N/A	DSI 9710	SHEET 2 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	AUTOMATIC LID OPENER INSTL	NTS
DATE	16.05.12	<small>COPYRIGHT © 2015 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

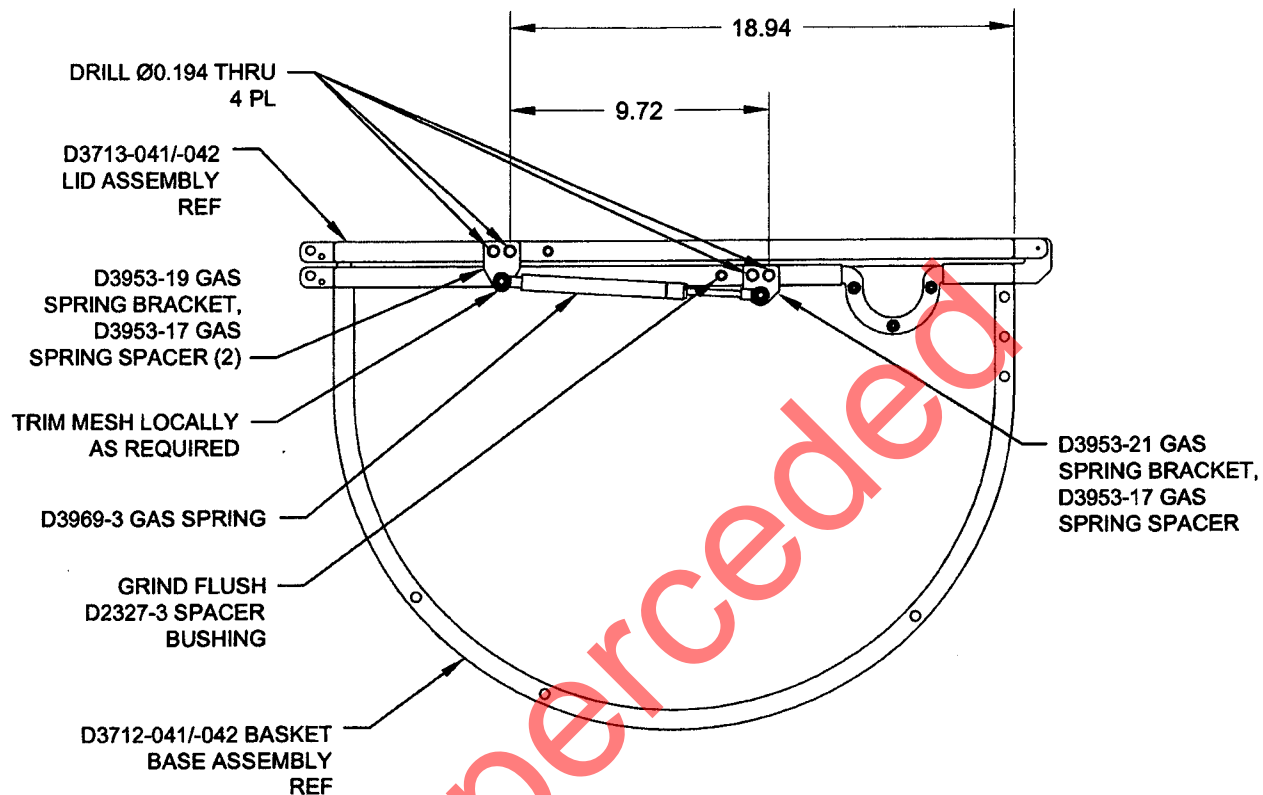


FIGURE 2: D205-541-053 AUTOMATIC LID OPENER INSTALLATION
 (ON D205-541-045/-046 HELI-UTILITY-BASKET, BOTH ENDS)
 (MESH NOT SHOWN FOR CLARITY)

CANADA
 DEPARTMENT OF TRANSPORT
 AIRCRAFT CERTIFICATION
 BRANCH
 DAO # 01-O-01

APPROVED

BY: *[Signature]*
 D. SHEPHERD (DE # 02)

DATE: 16.05.12
 CERT. NO.: SH96-120
 ISSUE NO.: 3

DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<i>g</i>		
CHECKED	<i>M. Lee</i>	DRAWING NO.	REV. B
MFG. APPR.	N/A	DSI 9710	SHEET 3 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	AUTOMATIC LID OPENER INSTL	NTS
DATE	16.05.12	COPYRIGHT © 2015 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

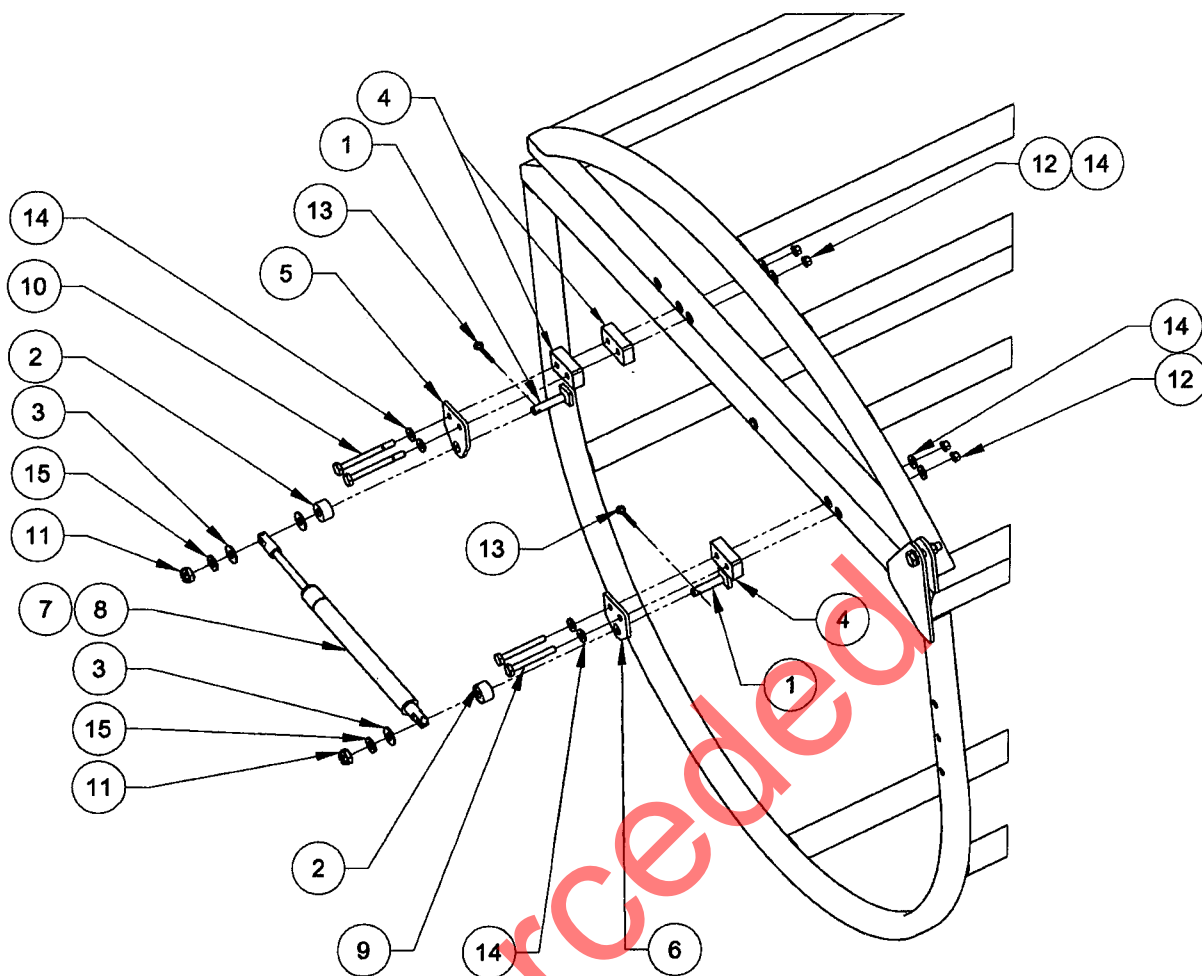


FIGURE 3: D205-541-051/-053 GAS SPRING KIT INSTALLATION
 (ON D205-541-043/-044: LH SIDE, AFT END SHOWN/RH SIDE AND FWD END SIMILAR)
 (MESH NOT SHOWN FOR CLARITY)

4.0 WEIGHT AND BALANCE:

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D205-541-051/-053	0.69 lb	- 63.13 in	- 43.6 in-lb	132.25 in	91.3 in-lb
Automatic Lid Opener Kit	0.31 kg	- 1.60 m	- 0.5 m-kg	3.36 m	1.0 m-kg

CANADA
 DEPARTMENT OF TRANSPORT
 AIRCRAFT CERTIFICATION
 BRANCH
 DAO # 01-O-01

APPROVED

BY: *[Signature]*
 D. SHEPHERD (DE # 02)

DATE: 16.05.12
 CERT. NO.: SH96-120
 ISSUE NO.: 3

DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<i>[Signature]</i>		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	N/A	DSI 9710	SHEET 4 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	AUTOMATIC LID OPENER INSTL	NTS
DATE	16.05.12	COPYRIGHT © 2015 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	